

REMARKS

The Examiner objected to the disclosure and stated that certain subscripts and range values require correction. Applicants note that the subscripts and range values in the application were correct and discernible from the context in which they are presented. An improved copy of the specification is provided in the attached Substitute Specification. No new matter has been added.

The Examiner objected to claims 1-4 for formalities, rejected claims 1-6 and 8 under 35 USC 101, and rejected claim 7 under 35 USC 102(b). Applicants have cancelled claims 1-8 and added new claims 9-32.

35 USC 101

The Examiner rejected claims 1-6 and 8 under 35 USC 101 and stated that the claimed invention is directed to non-statutory subject matter because the claims are directed to an abstract idea, such as a mathematical algorithm, which is not technically embodied. Applicants submit that new claims 9-32 overcome this rejection. New independent claims 9, 17, and 25 recite “generating a plurality of encryption keys associated with a plurality of digital objects stored in an electronic database.” New independent claims 13, 21, and 29 recite “requesting a plurality of digital objects from an electronic database.” Applicants respectfully submit that the new independent claims are technically embodied and therefore overcome the rejection.

35 USC 102(b)

The Examiner rejected claim 7 under 35 USC 102(b) as unpatentable over Chor. Applicants have cancelled claim 7 for reasons unrelated to patentability. New claims 9-32 have been added.

New Claims

New independent claims 9, 17, and 25 recite “transmitting...the digital object ciphertexts and encryption key ciphertexts.” New independent claims 13, 21, and 29 recite “receiving...a plurality of encrypted ciphertext digital objects.” One of ordinary skill in the art would recognize that, as the term is used in this specification, a digital object is a file comprising a plurality of bits. As non-limiting examples, a digital object can be a digital movie, a digital picture, a digital book, or a digital map. According to the digital object approach, a file comprising many bits can be operated upon as a single object. As a result, it is not necessary to request individual bits; retrieval of an entire object can be performed with a single request.

In rejecting claim 7, the Examiner relied upon Chor. Applicants submit that Chor only discloses operation on individual bits according to a “bit-by-bit” approach and does not teach a digital object approach. Therefore, the invention as described in the pending claims is patentable over Chor.

The digital object approach described in the application has several advantages over bit-by-bit approach taught by Chor. According to the bit-by-bit approach, each bit must be treated individually and only one bit can be retrieved per request. According to the digital object approach, for example, retrieval of a file comprising many thousands of bits incurs the overhead associated with the retrieval of one digital file. The bit-by-bit approach requires the same amount of overhead to retrieve only one bit as the digital object would require to retrieve such a large file.


Some of the advantages of the digital object approach are further described in the specification. At p. 3, it is described that the “computational costs of these [bit-by-bit] solutions are prohibitively large” that the “bit-by-bit” approach is “not feasible in practical applications, because of the time that would be required to solve each problem.” These and other limitations of the “bit-by-bit” approach are overcome by the claimed invention.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 455392000900.

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Respectfully submitted,

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Attachment: substitute specification